DOCUMENT RESUME

ED 184 303 **FL 010 713**

AUTHOR Lindholm, Kathryn J.; Padilla, Amado M.
TITLE Bilingual Children's Use of Language Mixing and Switching. Proceedings of the Los Angeles Second Language Research Forum (1st, Los Angeles, California, February 11-13, 1977).
PUB DATE Jun 77
NOTE 12p.; One of several papers presented at the Los Angeles Second Language Forum.

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Bilingualism; Bilingual Students; Child Language; *Code Switching (Language); English; *Interference (Language); *Language Research; Language Variation; *Second Language Learning; Spanish; Spanish Speaking; *Vocabulary

ABSTRACT

The linguistic interactions in the speech of bilingual children is systematically examined to determine their ability to differentiate between their two language systems. The speech samples of eighteen bilingual (Spanish-English) children aged two to six were examined for instances of deviation from the norms of the language of utterance due to familiarity with more than one language. Language mixing within a sentence boundary ("Yo tengo un car," "I have a car") and phrasal interaction ("I ask him que yo voy a casa," I asked him if I should go home) are considered. Language switching at the sentence boundary (e.g., Experimenter: "What are you doing?" Child: Estoy jugando con mis juguetes") is also discussed. Tabulated statistics reveal the breakdown of the linguistic interactions. Only 1.7% of the children's speech contains language mixing, usually the insertion of an English noun into a Spanish environment. That the children are conscious of the mixing is evident from its consistency. Language switching accounted for only 1% of the children's speech. Children appear to mix and switch for three reasons: (1) to test or mock the experimenter, (2) because the child momentarily forgets the correct word, or (3) the mixed word was more salient in the child's environment. (PMJ)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED184303

FL010713

Bilingual Children's Use of Language Mixing and Switching

Kathryn J. Lindholm Amado M. Padilla

Department of Psychology

University of California, Los Angeles

The study of infant/child bilingualism has received both a multidimensional and a multidisciplinary approach. Longitudinal studies by linguists who have investigated their own children's acquisition of two languages have shown that bilingual children can learn two languages with relative ease, and on par with monolingual children's acquisition of one language (Ronjat, 1913; Leopold, 1939, 1949a, b; Burling, 1959; Fantini, 1974; Bergman, 1976). Psychologists have demonstrated the ability of bilingual children to acquire two languages at a rate comparable to that of monolingual children learning one language with cross sectional studies (Padilla and Lindholm, 1976a, b), and with longitudinal studies (Padilla and Liebman, 1975). Additionally, confirmatory evidence suggesting that young children can easily acquire two languages directly and without confusion, has come from physiologists in their studies of the cerebral cortex (Penfield and Roberts, 1959).

On the other hand, it has been noted that bilingual children do not have enough time to learn two languages as well as monolingual children learn one language (Macnamara, 1966). Some researchers have even suggested that the speech of bilingual children is hampered because of their acquisition of two language systems (McCarthy, 1930; Smith, 1939), despite the fact that the bilingual child's language is more advanced than would be expected considering their age, sex and paternal occupation (McCarthy, 1954).

The questionable impact of bilingualism on children's differentiation of two language systems has begun to generate some interest among researchers. In a recent review of the literature on bilingual language acquisition, Ramirez (1974) comments that most investigators regard code switching as the failure of bilingual children to keep their two languages separate. This opinion has also been expressed by Swain and Wesche (1975) in their study of a French/English bilingual child. Contrary to this view of children's nondifferentiation of two languages is the belief held by researchers who have studied the dual language acquisition of their own children; they have reported that, although their children occasionally mixed the two languages within an utterance, the children were able to differentiate the two language systems from an early age (e.g., Fantini, 1974; Bergman, 1976). Further documentation of children's ability to make a distinction between the two language systems has come from Lindholm and Padilla (in press), in an examination of the code switching of five Spanish/English bilingual children, from which they concluded that language mixing is systematic and occurs infrequently.

It is our intent here to systematically examine the linguistic interactions in the speech of 18 bilingual children in order to determine their ability to differentiate between their two language systems.

First, it is necessary that we offer a more operational definition for the various types of interaction that are observed in the speech of bilinguals than has been proposed thus far in the literature.

We will define linguistic interaction here similar to Weinreich's (1953) definition of linguistic interference, that is, "instances of deviation from the norms of either language which occur in the speech of bilinguals as a re-

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Proceedings of the Los Angeles Second Language Research Forum.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Carol Henning

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

sult of their familiarity with more than one language" (p.1). However, we need to define two types of interactions. Language mixes will refer to interactions that occur within a sentence boundary (e.g., lexical: Yo tengo un car 'I have a car'; phrasal: I ask him gue yo voy a casa 'should I go home'). Similarly, switching will be defined as an interaction which occurs at the sentence boundary (e.g., Experimenter: "What are you doing?" Child: "Estoy jugando con mis juguetes" 'I'm playing with my toys).

The speech samples which will be discussed here were obtained from eighteen bilingual children between the ages of 2;0 and 6;4 years. All children were born in the United States and were second generation Mexican Americans. Of the eighteen children, 11 acquired English and Spanish simultaneously, while 7 learned Spanish first and then English upon entering school. Each child interacted with one pair of female experimenters; one spoke only Spanish to the child while one spoke only English. Thus, the child was led to believe that s/he was the mediator between the two experimenters. Each child's speech was tape recorded in the home and later transcribed by the pair of experimenters.

A total of 17, 864 utterances in English and Spanish were produced by the eighteen bilingual children. An examination of these utterances indicated that only 463, or 2%, contained a linguistic interaction. These interactions were then categorized as to whether they were a language mix or a language switch. The mixed utterances and the switches were further categorized according to language being spoken at the time of the switch or mix. Table 1 summarizes the breakdown of linguistic interactions. The preponderence of interactions occurs with mixed utterances, especially in Spanish environments. We shall use the concept of language environment here to specify what language is being used prior to the interaction.

TABLE 1

BREAKDOWN OF LINGUISTIC INTERACTIONS[a]

	LANGUAGE ENVIRONMENT		
INTERACTIONS	SPANISH UTTERANCE	ENGLISH UTTERANCE	TOTAL
MIXING	256	63	319
SWITCHING	98	46	144
TOTAL	354	109	463

[a]Based on a total of 17,864 utterances in English and Spanish.

LANGUAGE MIXING

Of the total 17,864 utterances, only 319, or 1.7% of the children's speech

could be classified as language mixing. Table 2 depicts the categorization of the mixed utterances according to the language environment and the level of mixing (i.e., lexical or phrasal). Lexical mixing involves the introduction of a single word from the second language into the utterance, while phrasal mixes include the insertion into the utterance of a phrase from the second language. The lexical and phrasal mixes are further subcategorized to depict at what point in an utterance the mix is occurring (e.g., lexical: noun, verb; phrasal: article + noun). Inspection of Table 2 indicates that lexical mixes occur much more frequently than phrasal mixes, and that the most common mix involves nouns, especially the insertion of an English noun into a Spanish environment. Much less frequent, although more predominant than other mixes, is the substitution of Spanish nouns for English nouns into English utterances. The few remaining lexical insertions are scattered throughout other linguistic categories. Similarly, phrasal mixes are not concentrated in any certain type of phrase.

TABLE 2

CATEGORIZATION OF MIXED UTTERANCES[a]

CATEGORY	SPANISH UTTERANCE WITH ENGLISH INSERTION	ENGLISH UTTERANCE WITH SPANISH INSERTION
LEXICAL		
NOUN	214	33
VERB	3	3
ADJECTIVE	7	2
ARTICLE	1	5
DEMONSTRATIVE	0	2
CONJUNCTION	6	3
SALUTATION	3	0
PHRASAL		
ADJECTIVE + NOUN	5	3
ARTICLE + NOUN	4	1
VERB + OBJECT	0	3
SUBJECT + VERB	2	0
SUBJECT + VERB + OBJECT	1	0
MISCELLANEOUS	10	8
TOTAL	256	63

[a]Based on a total of 17,864 utterances in English and Spanish.

The majority of English nouns mixed into Spanish sentences consisted of animal names (63, or 29%). The next most represented category pertained to 'people' such as cowboy, policeman, grandma; 'people' accounted for 37 or 17% of the mixed utterances in Spanish. Also frequently included were names for various toys (e.g., balloons, clay, bike; 26 or 12%, foods, vehicles and celebrations. Table 3 provides

a list of categories as well as the three most frequently appearing names in that category for both English and Spanish.

TABLE 3

LIST OF SUBORDINATE CATEGORIES AND THE THREE MOST COMMON NOUNS IN EACH CATEGORY

CATEGORY	ENGLISH	SPANISH
ANIMALS	SNAKE	BALLENA 'WHALE'
	BEE	PUERCOS 'PIGS'
	FOX	VACA 'COW'
PEOPLE	COWBOY	CARTERO 'MAILMAN'
	POLICEMAN	
	GRANDMA	
TOYS	CLAY	PELOTA 'BALL'
	BALLOONS	
	BIKE	
STRUCTURES	WINDOW	
	BUNK BED	
	SWIMMING POOL	
INSTRUMENTS	TV	GUITARRA 'GUITAR'
	TELEPHONE	PARAGUA 'UMBRELLA'
	STICK	
FOOD	CANDY	AGUA 'WATER'
	EGGS	FRIJOLES 'BEANS'
	LOLLIPOP	DULCE 'CANDY'
VEHICLES	BUS	TREN 'TREN'
	FIRE ENGINE	CARRO 'CAR'
	ROCKET	
CELEBRATIONS	BIRTHDAY	
	CHRISTMAS	
BODY ARTICLES	SHORTS	JAVON 'SOAP'
	PANTS	PESTANA 'EYELASH'
	FACE	
OTHER	SHOT	
	GARBAGE	
	SNOW	

An examination of the lexically mixed utterances consisting of the insertion of English nouns into Spanish utterances was undertaken to determine what preceded the English noun. It was found that the article was the most predominant precursory linguistic element. Spanish feminine and masculine definite and indefinite articles appeared before English nouns in over two thirds of the mixes in Spanish utterances; out of these, the masculine articles accounted for 80% of the articles.

Inherent in Spanish noun phrases are gender and number agreements between the article and the noun. The children's choice of number was usually correct, but the

choice of the gender of the article did not always coincide with the gender of the noun. Some examples of the children's mixed Spanish utterances are:

Allí tiene un fox. 'Over there he has a fox.'

Una, um, um window. 'A...window'

¿Y dónde está el whale grandote que va aquí?

'And where is the big whale that goes here?'

Los policemen están allí también. 'The policemen are over there too.'

¿Donde esta la worm? 'Where is the worm?'

In determining whether the child is using the correct Spanish gender, we must exercise caution, since when English words are translated into Spanish, several of them can take either gender, depending on the Spanish word that is chosen. For example, the translation of "fox" can be either el zorro or la zorra with the choice of words contingent upon the sex of the fox in question. A more subtle example is found with the word "garbage", which is more neutral and can be translated either as la basura or as el desperdicio. Thus, we can not use this distinction as any kind of determinant as to whether the child knows the corresponding Spanish word. In examining the speech samples, we found that the equivalent word was usually absent from the vocabulary and that assignment of gender to the articles generally appeared to follow two criteria: (1) corresponding to the natural gender of the noun (e.g., la lady; un fireman); and (2) neutral words with ambiguous genders are preceded by masculine articles (e.g., el whale, un swimming pool).

These results, in demonstrating that children are not always correct in gender selection are supported by Cornejo's (1975) examples of inconsistently correct gender in the speech of five year old Spanish/English bilinguals. Cornejo listed all of the children's examples of mixing and categorized them as above, deleting instances of gender inappropriateness. In our observation of the examples of incorrect as well as correct gender use, it became clear that Cornejo's children appeared to follow the same criteria for gender selection as our bilingual children. Cornejo attributed the cases of correct gender selection to the children's knowledge of the corresponding Spanish word. However, he failed to point out the examples of incorrect gender choice, and that some words appeared with both genders (e.g., "un book," "una book," "la bottle," "un bottle," p. 170). These examples are contradictory to a conclusion that the children have knowledge of the corresponding Spanish word and are assigning gender accordingly. Instead, the most plausible explanation seems to be that the children did not know the equivalent noun in Spanish and chose the gender in accordance with the above mentioned criteria.

The gender selection criteria appear to hold whether the child is a boy or a girl, although boys used more male than female articles. When the ratio of female articles to male articles was established separately for boys and girls, we found out that boys used male articles versus female articles at a rate almost twice that of girls. However, generally boys tended to talk more about soldiers, cowboys, and policemen than girls, who would spend more time making up stories from picture books.

The insertion of Spanish nouns into English sentences consisted mostly of animal names (13, or 40%), while other categories such as 'food', or 'instruments' received one or two entries. Inspection of Table 3 provides the reader with a fairly good idea of the Spanish nouns that the children inserted into English environments.

As with noun mixing in Spanish environments, many Spanish nouns that were inserted in English utterances were preceded by articles. In English, there is no gender agreement between the article and the noun, nor is there any number agreement between the definite article (the) and the noun. However, the indefinite article (a) requires number agreement since it can only be used singularly and it must be changed to "an" whenever it precedes a word which is initially vocalic (i.e., usually a word beginning with a vowel).

The bilingual children adhered to the lack of number and gender agreements for the definite article and to the singularity of the indefinite article. Some examples of the children's use of functors are:

You know what a ballena means? 'whale'

They're going in the agua. 'water'

Well, let's get the arboles. 'trees'

The remaining lexical mixes consisted of adjectives, verbs, articles, conjunctions, demonstratives and salutations. Table 2 breaks these types of mixes down according to the language environment. English adjectives and conjunctions were the most common insertions into Spanish sentences, while Spanish articles, verbs and conjunctions were the more frequent substitutions into English sentences. The English adjectives were mostly descriptive (blue, purple, funny, shorter, longer), and with the exception of the comparatives "shorter" and "longer", the adjectives were of the absolute form. For the two Spanish adjectives, the children converted nouns into adjectives (e.g., "a paragua thing." 'umbrella'; "Angelina and Juan and Eliseo call him the moco man." 'snot'). Conjunctions accounted for six English and three Spanish insertions. The verbs and demonstratives were inflected correctly in both languages and the salutations were used appropriately. In English, the article was a definite article, while in Spanish all five examples contained indefinite articles.

In summarizing the lexically mixed utterances, the most impressive result is the children's consistency in mixing. In both languages the predominant lexical mix involved nouns, especially nouns naming various kinds of animals. In both Spanish and English, the nouns were preceded most frequently by articles. The grammatical rules dictating number agreement were followed appropriately for each language. For the remaining lexical mixes (i.e., adjectives, articles), the same care was taken to insert them into the sentence appropriately. In many cases, the equivalent word to the children's insertion was absent, as indicated by an examination of the bilingual children's speech samples. However, even in cases where the corresponding word was observed, the mix cannot be attributed to the nondifferentiation of the two languages. Instead, it appeared that the mixed word was more salient to the child due to its greater frequency of use. Also, words were probably mixed when a child momentarily forgot the correct word in the appropriate language.

The attention that the children gave to mixing the sentences demonstrates the children's ability to differentiate between the two languages. In the Spanish utterances, the functors agreed in number with the substituted English nouns. Where necessary, the English functors also agreed in number with the Spanish inserted nouns. Additionally, in the lexically mixed utterances, there was no overlap in meaning; that is, when a word was mixed, the word was not repeated in the appropriate language, even when the two languages differed in terms of expressing a concept.

It is also interesting to note that many of the lexical mixes were preceded by silent and/or verbal pauses (e.g., um, uh). There were also occurences where the inserted noun followed functors that were repeated. Some examples are:

Ese, ese es un, ese es un, un Christmas

Ah, el, el cartun ya quiero.

Yo voy a ir a...a next year, voy a ir a...a first grade, con ustedes.

Hay una tienda que tiene bien muchas cosas y vive, vive de, vive across the street del, de la casa de Eli.

These examples suggest that the children are conscious of mixing the two languages, and are reluctant to mix them. This hesitancy to mix utterances has also been reported by Swain and Wesche (1975) with their French/English bilingual child.

We will now briefly discuss the children's use of phrasal mixing, which was much less frequent and also less systematic than lexical mixing. Phrasal mixing accounted for only 0.2% of the language samples and 12% of the mixed utterances. Again, the majority of mixes occurred in Spanish environments. The most common phrases were the adjective + noun and article + noun phrases. There were also phrases where the verb and either the object or the subject of the verb, or both, were substituted. Some examples of the children's phrasal mixes are:

E Otra vez, what's your name? 'Again (another time), what's your name?'

S Esto es the ears. 'This is the ears.'

E ¿Can I sople? 'Can I blow it?'

E I know lo que puedo hacer un closet. 'I know that I can make a closet.'

S Uno you know what. 'One...'

E Se esta brushing his teeth.

Since the phrasal mixes accounted for only 0.2% of the children's speech, it is possible that a great many of the phrasal mixes were due to a child's unfamiliarity with one word or concept of the phrasal mix in the appropriate language. Instead of lexically mixing the utterance, perhaps the child elaborated the initially intended lexical intrusion with one or more words. This view is partially verified by an examination of the children's phrasal mixes which indicated that in many cases, one or more words of the mixed phrasal utterance was not produced in the appropriate language. Other phrasal mixes are accounted for by cases where children would begin the sentence in English and mix part way through while turning to their mother for verification (e.g., "It was walking up pero salio, ¿verdad Mami?").

When phrasal mixes and lexical mixes are integrated, the most illuminating result is the maintenance of structural consistency. This finding of overall maintenance of structural consistency has also been reported in studies of Spanish/English bilingual children by Padilla and Liebman (1975), by Cornejo (1975), and by Lindholm and Padilla (in press).

LANGUAGE SWITCHING

Language switching was defined earlier as the changing of languages at a sentence boundary. The switches are categorized in Table 1 according to the language environment. Language switching accounts for only one percent of the total speech of the bilingual children and for slightly more than one quarter of all the interactions. As with mixed utterances, most of the language switches occurred in Spanish environments, although this was not a rule since individually, the children differed according to the environment; this being dependent on whether the child was more dominant in one language than the other language.

Most of the language switches are attributed to just a few children who produced 10-20 switches in one or the other language. The remaining children switched an average of five times each. Slightly less than half of the switches contained only one word and the remaining switches were equally divided between two word, three word and four or more word switches. Some examples of language switches are:

Whatever

He's hiding

But you can't hardly see it.

Supposed to be a bear dinner but it's too small

Frijoles 'beans'

Es chueco 'It's crooked'

Es para los indios. 'It's for the indians.'

The one word switches, as with the lexical mixes, were produced because the children either did not know the corresponding word in the appropriate language or they momentarily forgot it. As with the phrasal mixes, one of the words in the two word switches appeared to be unknown(e.g.,"El toro" 'the bull';"A brush"). There were a few occasions where children would switch in order to purposely exclude the experimenter from the conversation. The children appeared to do this when they wanted to talk with the other experimenter or when they wanted to make fun of the experimenter they were talking with. An example of a child switching in order to make fun of an experimenter is:

F:	C: Know what's wrong with your teeth?
What about my teeth?	Look at this one.
What about it?	Es chueco. 'It's crooked' (giggling)
It's what?	Es chueco.
What's that?	Chueco. (giggles again)
What's the English for that? I don't understand what you're saying?	Chueco. (changes subject)

Another motive for switching was to ascertain whether the two "monolingual" experimenters were really monolingual. Several children were skeptical about whether the experimenters really did not understand them when they mixed or switched languages. Too many times experimenters reinforced the children's doubt by replying to a switch or a mixed utterance. What follows are examples where the experimenter answered with understand to a child's language switch or mix.

E:	C:
¿Y que son estos?	Wings.
('And what are these?)	
Ah ha (yes). ¿Son alas de quién?	
('Whose wings are they?')	

Language switching neither directly supports nor refutes the case for language differentiation. Although switching may be said to negate the view that children can distinguish between the two language systems, switching also adds much in the way of corroborative evidence in a hypothesis suggesting differentiation. The fact that children can use the one language which one experimenter does not understand in order to banter the experimenter seems to be an argument in favor of language differentiation.

In summary, the reasons for the children's mixing and switching appear to be numerous. Children would switch languages in order to determine whether the supposedly monolingual speaker actually understood another language. Children picked up several cues that the monolinguals understood more than they let on, by means of interactions where the experimenter would ask a question pertaining to the mixed word, for example:

E: ¿"Y que son estos?"

S: "wings"

E: ¿"Son alas de quién?".

Also, some children switched languages to enable them to make fun of an experimenter. An examination of the mixed words indicated that many of the mixings were due to an absence in the child's vocabulary. Other times, it seemed that the child

momentarily forgot the word which was caused by a problem in the retrieval process. Another reason for interaction is due to the greater saliency of various words or phrases. In many cases the children produced English names of animals, people and foods. These words are heard much more often in English because of television and radio advertisements or programs.

One additional explanation for linguistic interactions comes from the child's communication experiences. In most bilingual environments, the communication process involves language mixing. Gumperz (1967) has pointed out that bilinguals switch their languages to have some social impact. Certainly the poet Alurista (1971) achieves this social impact in his poetry when he mixes English and Spanish, an impact not obtainable from one or the other language. In terms of our bilingual children's environment, we observed several mothers who switched or mixed their two languages.

When we add this aspect of the children's interaction with their communication process, we can hardly conclude that the children are mixing or switching their languages indiscriminately. In fact, when one considers that the children mixed less frequently than might be expected of a bilingual, it appears that linguistic interactions may have been inhibited because of the monolingual experimenters.

In sum, it appears that the bilingual children are able to distinguish between their two language systems. This conclusion seems warranted, especially in light of the small percentage of actual mixing in the speech of the children and in the systematic nature of the lexical mixes.

References

Alurista. Floricanto. Published by Chicano Studies Publications, University of California, Los Angeles, 1971.

Bergman, C. D. Interference vs. independent development in infant bilingualism. In G. Keller, R. Teschner, & S. Viera (Eds.), Bilingualism in the Bicentennial and Beyond. New York: Bilingual Press/Editorial Bilingue, 1976.

Burling, R. Language development of a Garo and English-speaking child. Word, 1959, 15, 45-68.

Cornejo, R. The acquisition of lexicon in the speech of bilingual children. In Turner, P. (Ed.) Bilingualism in the Southwest. Tucson, Arizona: The University of Arizona Press, 1975.

Fantini, A. "Language Acquisition of a Bilingual Child: A Socio-Linguistic Perspective." (Ph.D. Dissertation, University of Texas at Austin, 1974.)

Gumperz, J. J. On the linguistic markers of bilingual communication. Journal of Social Issues, 1967, 23, 48-57.

Leopold, W. F. Speech Development of a Bilingual Child: A Linguists' Record. Vol. 1: Vocabulary Growth in the First Two Years, 1939. Vol.3: Grammars and General Problems in the First Two Years, 1949 (a). Vol. 4: Diary from Age Two, 1949 (b). Evanston, Ill.: Northwestern University Press.

Lindholm, K. J. & Padilla, A. M. Bilingual children's use of language mixing and switching. Journal of Child Language, 1977, in press.

Macnamara, J. Bilingualism and Primary Education: A Study of Irish Experience. Edinburgh: University of Edinburgh Press, 1966.

McCarthy, D. Language development in children. In L. Carmichael (Ed.) Manual of child Psychology. New York: Wiley, 1946.

McCarthy, D. Language disorders and parent-child relationships. Journal of Speech and Hearing Disorders, 1954, 19, 514-523.

Padilla, A. M. & Liebman, E. Language acquisition in the bilingual child. The Bilingual Review/La Revista Bilingue, 1975, 2, 34-55.

Padilla, A. M. & Lindholm, K. J. Acquisition of bilingualism: A descriptive analysis of the linguistic structures of Spanish/English speaking children. In G.Keller, R. Tischner, & S. Viera (Eds.), Bilingualism in the Bicentennial and Beyond. New York: Bilingual Press/Editorial Bilingue, 1976.

Penfield, W. The learning of languages. In W. Penfield & L. Roberts (Eds.), Speech and Brain Mechanism. Princeton: Princeton University Press, 1959.

Ramirez, A. "The Spoken English of Spanish Speaking Pupils in a Bilingual and Monolingual School Setting." (Ph. D. dissertation, Stanford University, 1974).

Ronjat, J. Le Development du Language Observe Chez un Enfant Bilingue. Paris: Librairie Ancienne H. Champion, 1913.

Smith, M. E. Some light on the problem of bilingualism as found from a study of the progress in mastery of English among preschool children of non-American ancestry in Hawaii. Genetic Psychology Monographs, 1939, 21(2), 119-284.

Swain, M. & Wesche, M. Linguistic interaction: Case study of a bilingual child. Language Sciences, 1975, 37, 17-22.

Weinreich, U. Languages in Contact. New York: Linguistic Circle of New York, 1953.